Empowering Participation

Examining Women's Access to Formal Financial Resources and Women's National Parliamentary Representation

Undergraduate Honors Thesis
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Most importantly, a deep and humble appreciation to the countless women and men around the world who have provided inspiration through their tireless efforts to promote a world characterized by social equality.

Abstract

Women's access to financial resources is popularly hailed and strongly evidenced to be a development tool that champions women's economic empowerment. Globally, does economic empowerment through women's access to formal financial resources translate to women's political empowerment in established political institutions? To what extent do women's use of formal financial resources (defined as use of financial and savings accounts, credit cards, and the taking of loans from financial institution) correlate with women's political representation in national parliaments?

The purpose of this thesis is to utilize cross-national data to investigate this question by examining the extent to which women's access to formal financial services is correlated with increased women's representation in national parliaments. This thesis will utilize data from the World Bank's "Gender Statistics and Indicators" database from 195 countries around the world to test the existence, direction, and strength of any potential relationship, controlling for important confounding variables. (World Bank, 2013) Statistically significant relationships that emerge will then be analyzed in the context of other scholarly works to draw conclusions, discuss policy implications, and suggest areas for further investigation.

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I. Introduction

When the Nobel Peace Prize was jointly awarded in 2006 to Bangladeshi banker Muhammad Yunus and the groundbreaking Grameen Bank that he founded, the world universally recognized and praised the banker and his bank for transforming the efforts of poverty alleviation to include a focus on financial empowerment by pioneering the concept of microfinance.

The introduction of microfinance, an innovative financial tool that provides financial resources to low-income individuals, created a revolutionary shift in development economics as financial services to promoting empowerment of disadvantaged groups, particularly women, has gained new importance as a crucial policy priority. As explained by Yunus, "money begets money…If you have that money in your hand, you desperately try to make the best use of it and move ahead" (PBS). Yunus's model of microfinance proved to promote such empowerment by providing women the opportunity to improve the status of their health, education, and standard of living. By highlighting the importance of access to capital in augmenting individual empowerment and improving such outcomes, Yunus pioneered a movement to increase financial resource accessibility to poor and underprivileged populations. Following the success of Yunus' model, professionals in the field began to focus on access to financial resources as a key to women's empowerment worldwide.

While microfinance has received overwhelming attention in the field of development economics, a focus on providing formal financial resources to women around the world has become an increasingly popular and widely adopted policy priority. However, provided that microfinance functions on a small scale with benefits accruing to small selected groups, can the promise of women's empowerment through financial

empowerment be achieved on a more macro level? Is there evidence that women's use of financial resources translates to women's empowerment? In particular, do use of these financial resources reverberate into political empowerment of women in top political institutions?

If a relationship exists between women's use of formal financial resources and women's political representation, this could have important policy implications. The implications are especially meaningful in a world in which women made up 49.6% of the worldwide population yet only represented on average 18.3% of seats in national parliaments in 2011 (World Bank, 2013). The purpose of this thesis is to understand if there is a relationship between women's use to formal financial resources and their ability to participate in formal political processes through representation in national political institutions; does the empowerment from women's use of formal financial resources relate to any larger political empowerment in their inclusion in political representation?

II. Background

i. *Women's Access to Financial Resources*

Access to financial resources include a variety of financial products and services including personal and savings accounts, loans, and credit. Access to capital is derived from formal sources (such as banks or other financial institutions) or non-formal sources (such as family, friends, community organizations, non-profit organizations, or local lenders). It is well documented that women face higher barriers in access capital than do men. Surveys show that not only are women less likely to take out a loan than men, terms of borrowing are worse for women than men, including higher interest rates, higher collateral requirements, and shorter-term loans (IFC, 2011). In addition, women face

non-financial barriers to access capital. Such barriers include formal gaps such as inequality in property rights and legal capacity and non-formal gaps including gender discrimination and education and management differentials (IFC, 2011).

The benefits of women's access to financial resources are well documented in development literature. In fact, facilitating women's access to finance has been shown to improve their access to markets, education, and healthcare and provide them greater autonomy and decision making within households. Given that women are more likely to make decisions that benefit the household and children, this leads to further development benefits that improve the welfare of children and families. (Kabeer 1998; Khandker 1998; Pitt and Khandker 1998). With independent access to financial resources, women can earn income and gain financial autonomy. Such autonomy helps to empower women, leading to improvements in the social and political status of women around the world.

ii. *Women's Political Participation*

Worldwide, women are underrepresented in the highest levels of political institutions. Despite the fact that women make up nearly half the population of every country around the world, they are do not participate in politics to nearly the same extent as men. In 2011, the average percentage of women represented in national parliaments worldwide was 20% and only 13 of 190 nations had a female head of government. There were only two nations where women made up at least 50% of the national legislature. Furthermore, only 15% of UN ambassadors and 17% of the world's cabinet ministers were women (Paxton and Hughes). At lower levels of government, these numbers don't improve significantly. Although exact numbers are difficult to locate to the diversity of political institutions at lower levels, Karl (1994) reports that women make up only a small

minority of legislative representatives, village councilors, town mayors, and cabinet members (both appointed and elected).

Why are women so greatly underrepresented? Several scholars offer differing explanations for why this disparity occurs. According to Karl, the political culture of top political institutions is alien to women. Historically relegated to household duties, women have a shorter history of participation and less experience in campaigning. The process of reaching political office is male-dominated and women themselves avoid the "political fray." Furthermore, women must overcome discrimination at all levels of the political process. In being relegated to traditional duties (to care for the household and family), female political participation is often seen as incompatible with these traditional roles which in turn leads to exclusion and discrimination, especially when these offices require appointments or nominations to be considered at top levels. In addition, women's weak economic position may also inhibit their ability to participate in political processes. When lacking substantial funds of their own, women are more often than men unable to gain the experience or make the social connection needed to run successful campaigns (Karl, 1994). Conway also offers further support for these theories, suggesting the impact of cultural expectations, the role of gatekeepers with men as powerbrokers, and the differential acquisition of skills required to gain office all contribute to the low proportion of women in public office (2001).

Although women face significant barriers to political participation and are greatly underrepresented in top political institutions, they have made significant progress in their political participation in the last century**.** While today, women are guaranteed the right to vote around the world, during the 19th century this right was denied to all women in every nation. The first woman elected to parliament was in Finland in 1907. Since then,

75% of countries have had women comprising at least 10% of national legislatures. In fact, the pace of this participation is rapidly increasing. According to Paxton and Hughes, "between 2000 and 2010, the average number of women in parliaments nearly doubled, from 11.7% to 19.4%. (2013)" While some countries, such as Rwanda and Sweden, have seen rapid growth in representation rates, other nations face continued barriers and stalled growth in women's political participation.

Although women are not well represented in top political institutions around the world, some women have been active in other spheres of political participation, including grassroots and community organizing and non-profit people's organizations. Historically, women have played an important role in mobilizing support for liberation and democracy movements. Yet, even with their important contributions in political and social change movements, few women seldom climb to the top of political power structures.

Why is political representation at the highest levels of government important? In every nation worldwide, political institutions are endowed with the powers to shape the institutions, which govern how citizens of their nations work, live, prosper, and thrive. Individuals with positions in these institutions hold the power to make decisions regarding the policies that shape national policies and investments and legitimate authority for society-wide decisions (Paxton and Hughes, 2013).

Why does it matter whether women hold political power? Data shows that increased gender representation in political decision-making processes has positive outcomes, including increased decision-making power, equitable representative democracy, wider range of issues and perspectives being voiced and put on the agenda, and greater ability to influence matters that impact the community such as the

environment, education, and welfare. There is widespread evidence that male lawmakers are less likely to initiate and pass laws that serve the interests of women and children, less likely to consider issues impacting women, including rape, domestic violence, women's health and child care (Paxton and Hughes, 2013). Furthermore, women in positions of political leadership serve as role models for other women and girls in overcoming limitations of traditional gender roles (Karl 2004). Political decision-making quality is also enhanced with the inclusion of women's perspectives. Not only does the inclusion of women double the talent pool of potential politicians, it also leads to more diversity of views which helps to discern which policies will be most effective (Paxton and Hughes, 2014).

In order for women to make a difference in decision-making, the United Nations has stated that they need to have a "critical mass" of at least 30% of representation in the legislature. Without this large minority, women's voices are more likely to be marginalized (Paxton and Hughes, 2014). According to the United Nations, for women to have an impact in decision-making in top political institutions, this "critical mass" should be prioritized.

iii. *Relationship between Women's Access to Financial Resources and Political Participation*

Can access to financial services empower women to reach political parity? Empowering women through microcredit institutions has recently become a popular area of study (and NGO investment). As Nallari and Griffith suggest, the literature on this topic falls short of a macroeconomic approach and focuses primarily on the impacts of empowering women through finance at the household level (2001). This research indicates that increased access to credit enhances women's earning capacity and control

of household assets, leading to greater autonomy within the household and greater decision-making (Kabeer 1998; Khandker 1998; Pitt and Khandker 1998). This includes autonomy in making financial decisions independent of their husbands (Agarwal 1997). However, recent literature suggests that increased access to credit helps to reduce poverty by enhancing productivity (Kaur 2007). In fact, data shows this in turn leads to women's increased labor market participation, productivity, and income that can be used for savings and loans. For example, study conducted on women owned businesses in the Middle East North Africa region found that these businesses generate over $100,000 USD per year in revenues (IFC, 2011). Therefore, women's access to capital can have important impacts on economic growth.

How do the benefits of this access to economic services translate to increased empowerment (and potentially increased political participation)? There is disagreement on this issue. Some scholars argue that access to financial services and economic resources is a source of power that leads to empowerment. This is supported by the reality that ownership of assets enables the ability to obtain other resources, such as education, work, access to mass media, and the ability to fund organizations and campaigns. This in turn results in the capability to impact political processes in the long run. However, others suggest that these resources are only a prerequisite to power and do not in fact lead to empowerment itself (Kapitsa, 2008). In this view, the entrepreneurial process that leads to the ability to access capital is a result of "human, social, physical, organizational and technological capital possessed by business owners and available to them via their personal backgrounds and experiences, contacts relationships, and networks" (Kapitsa, 2008, pg. 4). Therefore, as a result of this complex interplay of important social factors, a causal impact between access to formal financial services and women's political

empowerment is difficult to discern. While there are conflicting points of view on this matter, this thesis hopes to explore these relationships for further clarity on this important role between access to financial services and representation in political processes.

III. Method

The purpose of this thesis is to investigate the potential relationship between economic empowerment through the women's use of formal financial resources and women's political empowerment through women's political representation in national parliaments to determine the existence, direction and strength of a potential relationship.

i. Datasets

To investigate this research question, a quantitative approach was utilized to analyze the statistical significance of the potential relationship between women's use of formal financial resources and women's national political representation. A multi-country dataset from the World Bank's database, entitled "Gender Equality Data and Statistics" ("Gender Statistics"), was used to analyze this relationship. "Gender Statistics" is a database comprised of relevant gender-disaggregated indicators from national surveys in 195 countries. Although available through the World Bank, the data are derived "from datasets from the United Nations compiled by its Regional Commissions and Sectoral Agencies, as well as World Bank conducted or funded surveys and reports, such as the 2012 World Development Report on Gender and Development" (World Bank, 2013).

Although the dataset spans back to 1960 and was last updated in September 2013, the dataset coverage is sparse. It does not include information for all 195 countries on

each of the variables considered in this study for every year. In fact, for many of the variables that were relevant to this analysis gender-based data was available only recently starting in 2011. This is mostly due to the fact that collecting development statistics that are disaggregated by gender has only recently been considered a policy priority by institutions such as the World Bank. In addition, much of the data in the dataset comes from national surveys conducted by member countries. Therefore, the availability of the valid data relies on whether nations collect data and whether they collect reliable gendered data. As a result, there are some nations that must be omitted from this analysis due to lack of data on key variables of interest. When omitted, such countries are noted in this study.

ii. *Variable Selection*

In order to investigate a potential statistical significance between women's access to formal financial resources and women's political representation, these variables of interest must be investigated using appropriate proxies. To examine the extent of women's use of formal financial resources across countries, "Gender Statistics" included several relevant proxies listed in *Table A*. Four of the proxies used measure the use of formal financial resources. The other two variables measure use of both formal and informal financial resources, including loans in the past year and saved any money in the past year.

Table A: Women's Use of Financial Resources Proxies

Proxy of Analysis	Independent Variable[1] (% age 15+)	Variable Information
Formal Financial Resource Proxies	Account at a formal financial institution, female	145 countries in 2011 No other data available
	Loan from a financial institution in the past year, female	145 countries in 2011 No other data available
	Saved at a financial institution in the past year, female	145 countries in 2011 No other data available
	Credit card, female	145 countries in 2011 No other data available
Formal and Informal Financial Resource Proxies	Loan in the past year, female	145 countries in 2011 No other data available
	Saved any money in the past year, female	145 countries in 2011 No other data available

Because each of the variable proxies provides useful insights into different dimensions of women's use of financial resources, all of the above proxies were used in this investigation. However, only the first four variables above (including accounts at a formal financial institution, loans from a financial institution, saved at a financial institution, and credit cards) proxy for women's use of formal financial resources. Loans in the past year and saved any money in the past year are proxies for women's formal and informal use of financial resources (including through non-formal financial institutions, such as through family and friends, private lenders, savings clubs, employers, or store credit). Given the limited availability of coverage for these proxies across time, this study's analysis was limited to the year 2011. Because all variables proxies are expressed in percentage female, this analysis does not need to compare female statistics with male statistics because percentage female is a binary of percentage male (1-female percentage = male percentage).

To examine the extent of women's political participation across countries, "Gender Statistics" included one relevant proxy listed in *Table B*.

[1] Precise variable definitions were not available on World Bank website.

Table B: Women's Political Participation Proxy

Proxy of Analysis	Independent Variable	Variable Information
Political Representation	Proportion of seats held by women in national parliaments (%)	187 observations in 2011

In this study, the proportion of seats held by women in national parliaments was used as a proxy for political representation and evaluated as the dependent variable for all regression analyses. According to the World Bank "Gender Statistics" database, this variable represents "the number of seats held by women members in single or lower chambers of national parliaments, expressed as a percentage of all occupied seats…it is derived by dividing the total number of seats occupied by women by the total number of seats in parliament" (World Bank, 2013). Note below that this variable does not cover the upper body of bicameral parliaments.[2]

In this study, the proportion of seats held by women in national parliament variable is an appropriate proxy for women's political participation because political power is frequently concentrated in the highest levels of governance in a nation. When women have higher representation in a national parliament, they are more likely to exercise their legislative authority to exercise decision-making, shape policy priorities, and promote policies that benefit women. Furthermore, equitable gender representation in national parliaments has the benefits of impacts mentioned in *Background*. Therefore, the proportion of seats held by women in national parliaments is an appropriate proxy for women's political empowerment.

[2] "National parliaments can be bicameral or unicameral. This indicator covers the single chamber in unicameral parliaments and the lower chamber in bicameral parliaments. It does not cover the upper chamber of bicameral parliaments. Seats are usually won by members in general parliamentary elections. Seats may also be filled by nomination, appointment, indirect election, rotation of members and by-election.

Seats refer to the number of parliamentary mandates, or the number of members of parliament."[6]

To determine if there was sufficient evidence to establish a statistically significant relationship between the independent and dependent proxies, the impact of contextual variables was assessed. Controlling for these contextual variables was important to minimize the potential for omitted variable bias, the bias derived from the exclusion of variables that might be correlated with women's use of formal financial services or that might impact women's political representation in national parliaments. Controlling for these contextual variables was especially important given that the independent and dependent proxies span the diverse contexts specific to the 195 countries included in the dataset. These contextual variables are shown in *Table C.*

Table C: Contextual Control Variable Information

Control	Proxy of Control[3]	Variable Information
Quota[4]	Constructed binary from Quota Project data	0=no quota 1=any quota (see below) N=195
Wealth	GDP per Capita (US$)	2011: N=176
Labor Force Participation	Labor participation rate, female (% of female population ages 15+)	2011: N=176
Health	Life expectancy at birth, female (years)	2011: N=187
Education	School enrollment, primary, female (% gross)	2011: N=111

Quotas are policy tools that recruit women into political positions by requiring that "women must constitution a certain number or percentage of the members of a body, whether it is a candidate list, a parliamentary assembly, a committee or a government" (Quota Project, 2013). Quotas were controlled in this analysis by constructing a binary variable using information available from the "Quota Project" database to determine if nations held at least one form of political quotas for women. Nations were coded with a

[3] Precise variable definitions were not available on World Bank website.

zero if no quota of any kind existed. Nations with a quota (including constitutional and/or legislative reserved seats, constitutional and/or legislative legal candidate quotas, and/or voluntary political party quotas) were coded with a one. It was important to control for quotas because quotas directly influence the proportion of seats held by women in national parliaments.

Wealth and health were controlled because both variables are important proxies for the level of development in a nation. It is standard practice in the field of development economics to include these controls in regression analyses to omit potential variable bias they might influence on the relationship of study. In the context of this study, it was likely that the level of a nation's development would be highly correlated with women's use of financial resources. Because of this, it was important to control for these development proxies.

Labor force participation was also controlled in this study. Because the degree of women's participation in the economy will directly impact women's earnings and the need for formal financial resources, it was likely that labor force participation would be highly correlated with women's use of financial resources.

Finally, education was controlled because it directly impacts the size of earnings an individual can make in a lifetime. With higher earnings, the need for financial services increases. As a result, this contextual variable was controlled because it was similarly likely that this education would be highly correlated with women's use of financial services. While regression analyses were run with this control, a lack of available data for each nation in the dataset resulted in the number of observations in the statistical results to decrease to 77 nations. Therefore, the small sample size of countries was not representative of a global relationship.

Using different combinations of controls in eight linear multiple regression models (see *Appendix C, Models 2-9)*, these contextual variables were controlled to isolate the relationship between the independent and dependent variables of interest. This helped to eliminate the influence of potential variable bias from quotas, wealth, labor force participation, and health on the findings of this analysis. It is important to note that there may be other variables relevant to control. However, given limited data availability, only those variables listed in *Table C* were controlled in the regression models of this analysis

iii. Data Analysis

A quantitative approach required the use of statistical models and regression analysis to interpret the relationship between the degree of women's access to formal financial resources and women's political representation in national parliaments. In the quantitative analyses, women's use of formal financial resources was assigned to be the independent variable and women's political participation the dependent variable. These variables of interest were investigated by using six (see *Table A)* appropriate proxies for women's use of formal financial resources and one appropriate proxy for women's political representation in 2011 (see *Table B.*)

The six independent proxies were evaluated using linear regression analysis versus the dependent proxy. To establish a baseline analysis, the single-variable relationships between the six proxies for use of financial resources and the proxy for women's political representation were evaluated with the quota binary as the only contextual variable included (see *Table F, Model A or Appendix C, Model 1)*. To determine if the baseline analysis provided sufficient evidence for a statistically significant relationship between the independent and dependent variables and to control for omitted variable bias, as mentioned above, the impact of contextual variables was assessed (*Appendix C, Models 2-9)*.

Eight regression models were constructed that incorporated different combinations of the relevant contextual control variables including quotas, GDP per capita, percentage of women's labor force participation, women's life expectancy at birth, and percentage of women in primary school enrollment (see *Appendix C, Models 2-9)*.

Using the quota binary, the nations were then separated into those nations with women's political quotas and those without quotas. Regression analyses were then completed between the four proxies for women's use of formal financial resources and the proxy for women's political representation using a model that included the contextual control variables of GDP per capita and women's labor force participation (*see Appendix D*). Because the data for this analysis only addressed one-year, there was not sufficient evidence for causal claims to be investigated

IV. Findings

i. Summary Statistics

Table D below shows the summary statistics for the dependent, independent, and control variables used in this analysis, including mean, standard deviation, and range of data in year 2011.

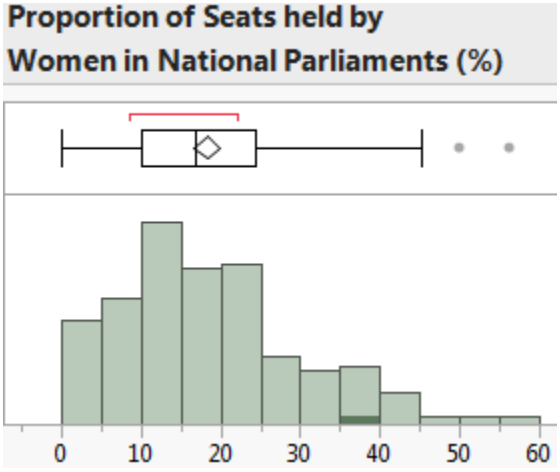
Table D: Summary Statistics of Variables Used in Analysis

Variable	Mean	Standard Deviation	Minimum	Maximum
Proportion of seats held by women in national parliaments (%) N=187	18.27	11.38	0.00	56.30
Account at a formal financial institution, female (%) N=145	42.71	32.34	0.80	99.82
Loan from a financial institution in the past year, female (%) N=145	8.93	6.06	0.49	30.28
Loan in the past year, female (%) N=145	34.62	13.09	7.66	69.79
Saved at a financial institution in the past year, female (%) N=145	16.67	16.47	0.08	64.02
Saved any money in the past year, female (%) N=145	33.12	17.31	5.68	82.37.92
Credit card (% age 15+) N=145	14.64	18.73	0.00	80.03
Quota (binary) N=195	0.60	0.49	0.00	1.00
GDP per Capita ($K) N=184	14.13	22.27	0.24	163.03
Labor participation rate, female (% age 15+) N=176	53.07	16.02	13.10	88.20
Life expectancy at birth, female (years) N=187	72.20	10.03	45.27	86.34
Primary school enrollment, female (%) N=111	104.16	18.16	42.11	179.00

Graph 1A shows the distribution of the proportion of seats held by women in national parliaments in 2011. The graph shows that most nations fall far below gender parity in political representation of national parliaments. In fact, with only thirty nations above

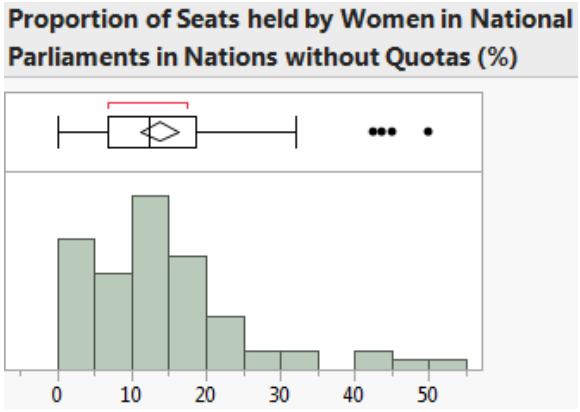
30% of women's political representation in national parliaments, nearly 85% of nations fall below this "critical point" recommended by the United Nations.

Graph 1A: Distribution of Proportion of Seats held by Women in National Parliament

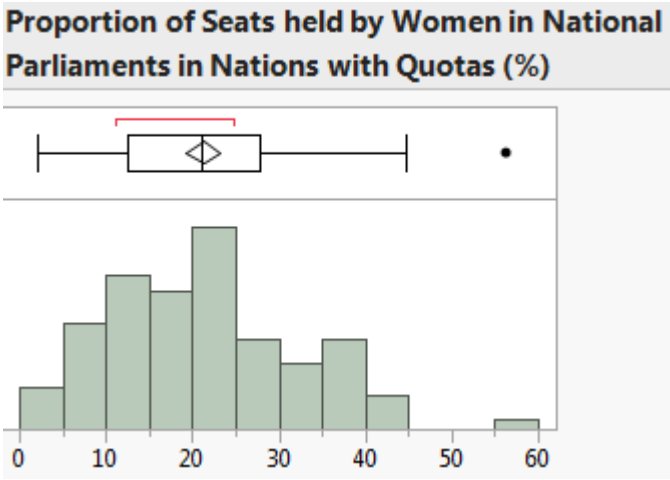


Graphs 1B and *1C* show the distribution of the proportion of seats held by women in national parliaments for those nations with quotas (*Graph 1B)* and those without quotas (*Graph 1C)*. Nations with quotas have an average proportion of seats at 21.16% while those without quotas have an average of 13.74% (standard deviation is 10.75%). Countries with quotas have a higher average and a higher distribution of seats held by women in national parliaments.

Graph 1B: Distribution of Proportion of Seats held by Women in National Parliaments in Nations without Quota Systems

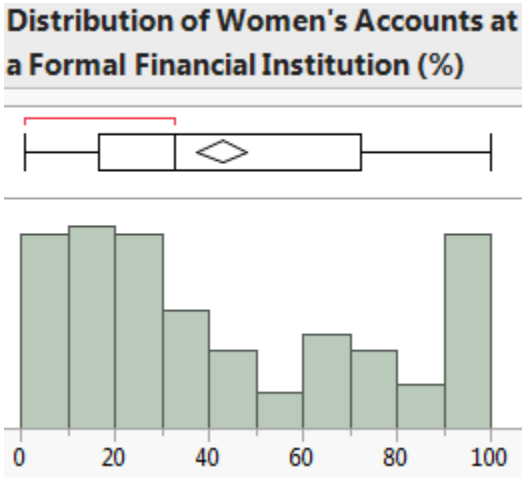


Graph 1C: Distribution of Proportion of Seats held by Women in National Parliaments in Nations with Quota Systems



Graph 2 shows the distribution of accounts held at a formal financial institution in 2011. The data shows that in 95% of nations less than 40% of women have accounts.

Graph 2: Distribution of Accounts at a Formal Financial Institution in 2011



Graph 3 shows a scatterplot of proportion of seats held by women in national parliaments versus the percentage of women with accounts at a formal financial institution in 2011. The red line is a linear fit for the scatter plot with an adjusted R-

squared value of 0.051. This linear fit shows that the higher the percentage of women with accounts at formal financial institutions, the slightly higher the proportion of parliamentary seats held by women.

Graph 3: Scatterplot of Proportion of Seats held by Women in National Parliaments on Accounts at a Formal Financial Institution in 2011

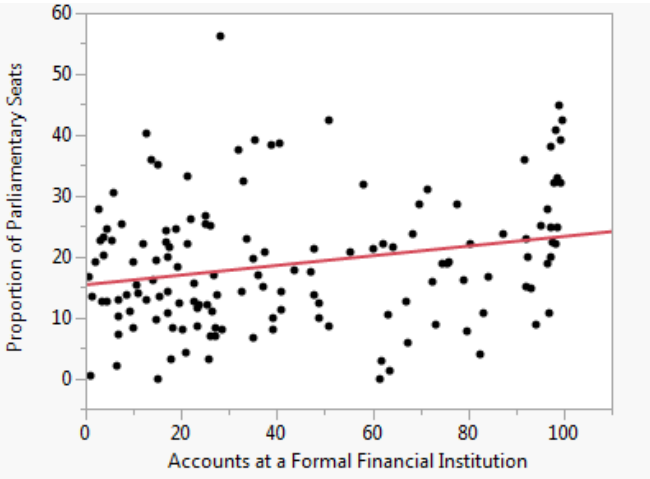


Table E is derived from *Appendix A* and highlights nations that fall on the lowest (<1%) and highest ends of women's political representation (>45%) as well as some nations that fall around the mean (18.27% +/- 1%). It also includes the quota and independent variable data for these nations.

As evidenced by the low adjusted R-squared value in *Graph 3* and the country statistics in *Table E*, there are exceptions to the relationship observed in *Graph 3* in which the higher the percentage of women with accounts at formal financial institutions, the slightly higher the proportion of parliamentary seats held by women. For example, Qatar has a high proportion of women with accounts (61.57%) yet no women in national parliamentary seats. On the other hand, Rwanda has the highest proportion of women in national parliamentary seats (56.3%) but has a low proportion of women with accounts (28.25%).

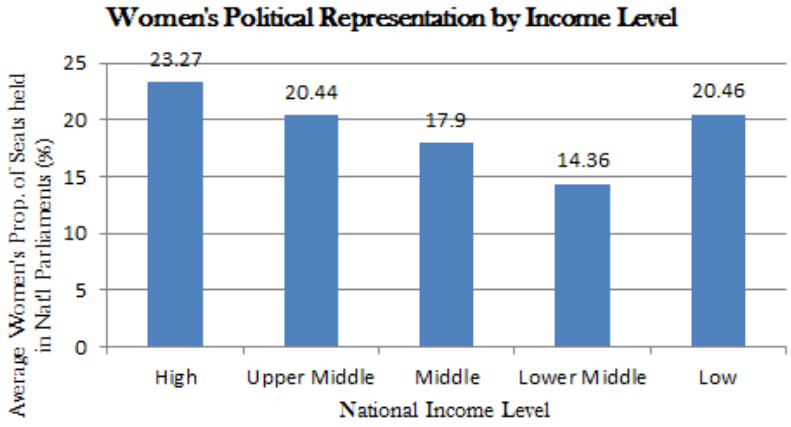
Table E: Range of Variables of Interest for Nations on Low, Average, and High Ends of Women's Political Representation[5]

Country	Percentage of Women in Parliament	Account at Formal Fin. Inst.	Loan at Formal Fin. Inst.	Savings at Formal Fin. Inst.	Quota
World Averages	18.27	42.71	8.93	16.67	.60
Qatar	0.0	61.57	9.84	21.16	0
Saudi Arabia	0.0	15.23	1.40	6.14	0
Yemen	0.3	1.09	0.74	0.11	0
Indonesia	18.2	19.21	8.15	15.87	1
Mauritius	18.8	74.73	9.00	27.06	0
France	18.9	96.57	17.35	45.70	1
El Salvador	19	10.13	2.82	8.74	1
Tajikistan	19	2.14	3.22	0.08	0
South Africa	42.3	51.02	6.47	20.55	1
Finland	42.5	99.82	19.48	57.23	0
Sweden	44.7	99.01	22.47	64.03	1
Rwanda	56.3	28.25	7.95	12.63	1

Graph 4 shows the average national women's representation in parliament by national income level. Except for countries at the lowest end of the national income, there is a relationship that indicates that the higher a nation's income level, the higher the female representation in parliament.

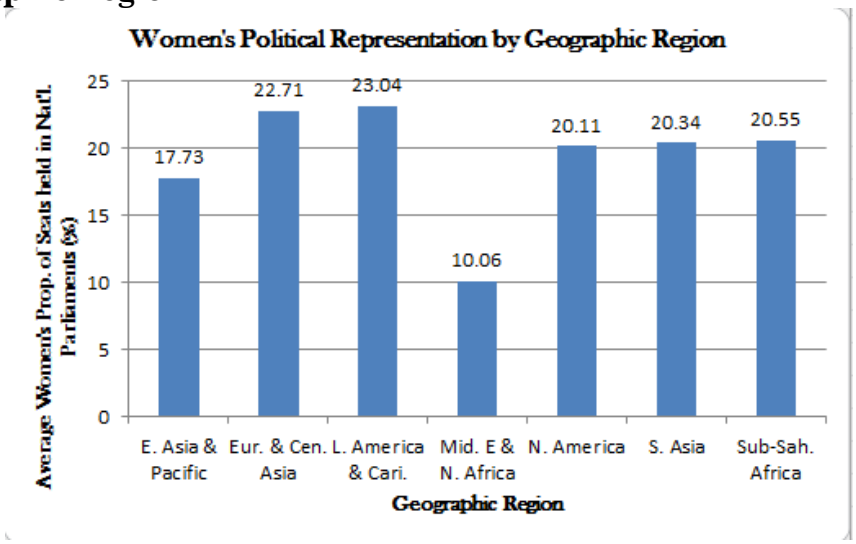
[5] Note: Countries omitted from lack of data: Dem. Rep. Congo, Fiji, Guinea, Kosovo, Libya

Graph 4: Average National Women's Representation in Parliament by National Income Level



Graph 5 shows the average national women's representation in parliament by geographic region by major regional groupings (more detailed geographic regions are included in *Appendix B*). According to this graph and *Appendix B*, the geographic regions with the lowest degree of women's political representation are the Middle East (10.00%) and small Pacific islands (2.67%) The regions with the highest women's political participation rates are the Caribbean (developing only, 32.31%) and the Europe Area (26.37%).

Graph 5: Average National Women's Representation in Parliament by Geographic Region



ii. Regression Analysis

Appendix C provides the full regression analysis results for the proportion of women's seats in national parliaments versus women's use of financial resources proxies and other contextual control variables. In *Appendix C,* the proportion of women's seats in national parliaments was regressed on each of the six proxies for women's use of financial resources in nine models. *Table F-1* shows the variables included in each of these models.

Table F-1: *Appendix C* Regression Model Description

Model	Dependent Variables	Independent Variables	Controls
Model 1	Proportion of women's seats in national parliaments	Proxies for Women's Use of Financial Services	Quota
Model 2			Quota and GDP per Capita
Model 3			Quota and Life Expectancy at Birth
Model 4			Quota and Labor Force Participation Rate
Model 5			Quota, GDP per Capita, and Life Expectancy at Birth
Model 6			Quota, GDP per Capita, and Labor Force Participation Rate
Model 7			Quota, Life Expectancy, and Labor Force Participation Rate

Model 8			Quota, GDP per Capita, Life Expectancy, and Labor Force Participation Rate
Model 9			Quota, GDP per Capita, Life Expectancy at Birth, Labor Force Participation Rate, and Primary School Enrollment

Table F-2 provides the regression analysis results for the proportion of women's seats in national parliaments versus women's use of financial resources proxies and other contextual control variables for Models 1, 6, 8, and 9 from *Appendix C*. These models were selected for *Table F-2* to summarize the findings in *Appendix C*.

Model 1 (derived from *Appendix C, Model 1*) shows the proportion of seats held by women in national parliaments versus the use of formal financial proxies with quotas controlled for via the inclusion of the quota binary. *Model 6 (derived from Appendix B, Model 6*) shows the proportion of seats held by women in national parliaments versus the formal financial resources proxies with quotas, wealth and labor force participation rate contextual variables controlled for via the inclusion of the quota binary, GDP per capita and labor force participation rate. Model 8 (derived from *Appendix B, Model 8*) shows the proportion of seats held by women in national parliaments versus the formal financial resources proxies with quotas, wealth, labor force, and health contextual variables controlled via the inclusion of the quota binary, GDP per capita, labor force participation rate, and life expectancy. Because life expectancy and GDP per capita both control for omitted variable bias due to the level of development, Model 6 only uses one of these controls (GDP per capita) while Model 8 uses both. Model 9 (derived from *Appendix B, Model 9*) is similar to Model 8 but also includes the rate of primary school enrollment.

Because the number of observations drops significantly (N=77), the education control was not included in all models.

In *Table F-3*, nations without quotas are separated from nations with quotas and the independent proxy of accounts at a formal financial institution was evaluated against women's national political participation, controlling for GDP per capita and labor force participation rate (the same regression case used in *Model 6).* The results of these regressions for the other proxies of women's access to formal financial resources are shown below (see *Appendix D* for additional regression results for other independent variables).

Table F-2: Regression Analysis Results for the Proportion of Women's Seats in National Parliaments versus the Use of Financial Resources Proxies and Contextual Variables[6]

Independent Variable	Model 1: Regress Independent on Proportion of Parliamentary Seats	Model F: Regress Model 1 with GDP per Cap and Labor Participation	Model H: Regress Model 1 with GDP per Cap, Labor Participation, Life Expectancy	Model I: Regress Model 2 with Primary School Enrollment+
Accounts in Formal Financial Institutions, (% female)	.079 (0.003)*** N=142	.063 (.092)* N=137	.0495 (.25) N=137	.062 (.31) N=77
Loan from a formal financial institution in the past year, (% female)	.25 (.083) N=142	.0615 (.68) N=137	.0145 (.93) N=137	.11 (.63) N=77
Loan in the past year, (% female)	-.048 (.49) N=142	-.049 (.48) N=137	-.016 (.83) N=137	.066 (.54) N=77
Saved at a financial institution in the past year, (% female)	.18 (.001)*** N=142	.13 (.10) N=137	.11 (.16) N=137	.22 (.09)* N=77
Saved any money in the past year, (% female)	.18 (.000)*** N=142	.10 (.14) N=137	.10 (.14) N=137	.13 (.230) N=77
Credit Card (% female)	.12 (.009)*** N=142	.063 (.43) N=137	.034 (.68) N=137	.47 (.004)*** N=77

Table F-3: Regression Analysis Results for Women's Use of Accounts at Formal Financial Institutions Proxy Disaggregated by Quota

	Model 6	**No Quota (quota=0)**	**Quota (quota=1)**
N	*137*	38	99
Adj-R Squared	*.19*	.42	.10
Accounts at Formal Financial Institutions	.063 (.092)*	.18 (.001)***	-.0043 (.93)
Quota	6.94 (.000)***	N/A	N/A
GDP per Capita	.000036 (.57)	-.00012 (.11)	.00015 (.085)*
Labor Force Participation Rate	.20 (.00)***	.32 (.00)***	.12 (.010)**

[6] Note: Coefficient is number without parenthesis and number with parenthesis is P-value. N=number of observations.

*Statistically significant at 90% level

**Statistically significant at 95% level

***Statistically significant at 99% level

iii. Discussion

Graph 1A shows that most nations fall far below gender equity in political representation. With an average worldwide proportion of 18.27% of seats in parliament occupied by women, nearly 85% of nations fall far below the United Nations "critical mass" of 30% of women's representation to influence change. In fact, only thirty nations achieved this minimum mass. *Graphs 1B* and *1C*, indicate that countries with quotas have a slightly higher average of women's political representation in national parliaments than those without quotas (21.16 versus 13.74, respectively). However, this difference is not large.

While *Graph 2* shows that in a majority of nations, less than 40% of women have accounts, *Graph 3* indicated that the higher the percentage of women with accounts, the higher the proportion of parliamentary seats held by women. As shown by *Graph 3,* there are multiple cases where nations have low levels of women with accounts and high levels of women's political representation. When this is this case for nations with more than 25% of women in parliament and below average (<42.71% of women with accounts at a formal financial institution), these nations have quotas for women's political representation. Alternatively, there are also cases where nations have high levels of women's accounts and low levels of women's political representation. However, these nations exhibit no pattern with respect to having quotas. Nations that have average levels of women's political representation have a wide range of levels of use of formal financial resources and have no consistent pattern of quotas.

Table F-2 shows the regression analysis results for the proportion of women's seats in national parliaments versus women's use of financial resource proxies and contextual

variables. In *Model A*, when the independent variables were analyzed only controlling for the quota binary on the proportion of women who hold parliamentary seats, all proxies for use of formal financial services were statistically significant at the 99% level except for loans from a formal financial institution and loans in the past year. For every regression run in *Model A*, the quota coefficient was at the 99% significance level (see *Appendix C).*

In *Model 6*, the independent variables were analyzed against the proportion of women who hold parliamentary seats while controlling for the quota binary, GDP per capita, and women's labor force participation. When controlling for these variables (that were used to account the effects for quotas, labor, wealth, and labor force participation), the proxies of accounts at a formal financial institution, savings at a formal financial institution and saved any in the past year were above or close to the 90% significance levels. Again, the quota coefficient for every regression in *Model 6* was statistically significant at the 99% level. However, the labor force participation coefficient was also statistically significant at the 99% level for every regression in *Model 6.*

In *Model 8*, the independent variables are evaluated against the proportion of women who hold parliamentary seats while controlling for the quota binary, GDP per capita, women's labor participation, life expectancy (that were used to account the affects of quotas, labor participation, wealth, and health), the proxies of savings at a formal financial institution and saved any in the past year were close to 90% significance levels (p values of .16 and .135 respectively). The quota coefficient and the labor force participation coefficient were both statistically significant at the 99% level for each regression in this model.

In *Model 9,* the independent variables were analyzed against the proportion of women who hold parliamentary seats while controlling for the quota binary, GDP per capita, life

expectancy, women's labor participation, and primary school enrollment (that were used to account for the affects of quotas, wealth, labor force participation, health, and education), only credit cards (99% significance), and saved at a financial institution (90% significance) were significant. However, the inclusion of this education control dropped the number of observations to 77 and was a statistically insignificant coefficient. Again, the quota and labor force participation coefficients for each independent variable in this regression was statistically significant at the 99% level.

When examining the regression results of *Appendix C* based on the proxy used for women's use to formal financial resources, there is evidence of a statistically significant relationship between women's accounts at a formal financial institution, women's savings at a financial institution, women's credit card with the proportion of women who hold parliamentary seats. The coefficients of women's accounts at a formal financial institution are statistically significant with at least 90% significance in six of the nine models shown in *Appendix C, (Models 1-6).* The coefficients for women's savings at a financial institution were statistically significant with at least 90% significance in seven of the nine models shown in *Appendix C (Models 1-5, 7 and 9;* note: *Models 6* and *8* were close to significance with p-values of .103 and.106, respectively). The coefficients on women's credit card use are statistically significant with at least 90% significance in four of the nine models (*Models 1, 3, 4, and 9)*. While percentage of credit cards held by women had slightly less evidence of a statistical relationship with the number of seats held by women in national parliaments, accounts held by women at a formal financial institution and savings at a financial institution had strong evidence of this relationship. Given the coefficients on these statistically significant findings were positive and small, there was evidence that women's use of formal financial services is slightly positively associated with women's

national representation in parliaments. In conjunction with the findings of *Models 1, 6, 8, and 9,* this evidence suggests that there is a statistically significant relationship between women's use of formal financial resources and women's political representation in national parliaments.

When the nations were then separated into those nations with women's political quotas and those without, the results of the regression analysis indicated even stronger evidence of a relationship between women's use of formal financial resources and the number of seats held by women in national parliaments (see *Appendix D).* However, this relationship was only observed in nations that did not have a quota system. Using a model that included the contextual control variables of GDP per capita and women's labor force participation, the regression results indicated that there was at least a 99% statistically significant relationship between the proxies of women's use of formal financial services, including accounts held by women at a formal financial institution, women's loans and savings at a financial institution, and women's use of credit cards, for nations that did not have a quota for women's political representation. Although the sample size was small for nations that did not have a quota, the strength of this relationship was further observed by a high-adjusted R-squared value (*Appendix D;* .32-.34) in comparison to those found in regressions that did not separate nations by quota (*Appendix C; .10-.21).* In the nations that did have a quota for women's political representation, there was no evidence for a statistical significance between women's use of formal financial resources and the number of states held by women in national parliaments. Therefore, a statistically significant relationship between women's use of formal financial resources and the number of seats held by women in national parliaments only exists for nations that do not have quotas.

In this study, there was strong evidence indicating the importance of quotas on women's political representation. In every regression analysis result, the coefficient on quotas was statistically significant at the 99% level. These coefficients were large in comparison to the coefficients on other control variables (*Appendix C;* 5.08-7.03 for the quota binary versus -0.03-0.25). The size and significance of these positive coefficients indicate that quotas to increase women's political representation are strongly associated with higher women's political representation. This is consistent with the purpose of women's political quotas to increase women's political representation. In addition, this is consistent with the observation in *Graph 1C* that nations with quotas have a higher average of the proportion of women holding seats in national parliaments.

Similarly, there was strong evidence indicating the importance of women's labor force participation. In every regression analysis result, the coefficient on quotas was statistically significant at the 99% level. Although these contextual control coefficients were not as large as those on quotas (*Appendix C, .16-.28),* this indicated that the degree that women participate in the formal economy is a strongly related to women's political representation.

Given that this analysis was limited to 2011, causality could not be established on the direction of the relationship between women's access to credit at financial institutions and women's political representation. However, there was sufficient evidence to suggest a slightly positive relationship between women's use of formal financial resources and women's political representation in national parliaments, particularly when no quota system exists.

V. Policy Implications and Further Research

Given the results of this analysis, there is evidence to suggest that it is important to promote policies that facilitate the inclusion of women in formal financial institutions. While no causality was established in this study, nations with greater women's use of formal financial resources were associated with greater gender parity in national parliaments.

This analysis found significant evidence that women's use of formal financial resources is associated with higher women's political representation in national parliaments in nations that do not have quotas for women's political participation. Because the analysis was limited to the data available in the year 2011, further research should be pursued to analyze the consistency of this relationship across time to determine causality of this relationship. If the results found in this study were borne out by further research, a potential policy implication for these results would be to formulate policies to increase the use of women's formal financial resources in nations where quotas do not exist. However, this study indicates that policies that promote such financial inclusion should emphasize access to women's accounts at financial institutions and women's savings at financial institutions over promoting women's loans at financial institutions. Given the recent trend in development economics in promoting policy that provides loans to women as a mechanism for women's empowerment, the evidence in this analysis suggests that this policy should be reassessed.

While this study examined women's political representation in national parliaments, follow-on areas for further research on women's political empowerment could include examining women's representation in other political institutions (heads of state, ministerial positions, upper house of bicameral legislatures), women's representation at

other levels of government (regional, provincial, local), and the extent to which women participate in other political sphere worldwide, including voting and grassroots organizing. Other areas for potential further research could also include examining the geographic differences that might contribute to geographic differences in women's political participation.

The strong statistical significance associated with higher labor force participation by women suggests that a relationship exists between the degree that women participate in the formal economy and the number of women who hold seats in national parliament. If further research confirms this relationship, policies that help women to overcome barriers to labor force participation, such as job training programs or childcare support, should be considered.

In addition, the strong statistical significance associated with higher women's political representation in national parliaments in nations where a women's political quota is in place suggests that quotas should be promoted as a policy to improve gender parity in political institutions. While this analysis was limited in the specificity and variation used to define quota systems around the world, an area of further research is to examine the types of quota systems that are most effective in promoting gender parity.

Women are still far from reaching gender parity in representation of top political institutions worldwide. Without such parity, it is difficult for societies to gain the benefits that come from gender parity in policy decision-making. Therefore, it is important to craft policy that promotes such parity around the world.

VI. Conclusion

In nations do not have a quota for women's political representation, there is evidence of a statistically significant relationship between women's use of formal financial resources and women's national political representation. However, in nations that do have a quota for women's political representation, there is no evidence of a statistically significant relationship between women's use of formal financial resources and women's national political representation. The results of this study indicate that when a nation's goal is to promote the representation of women in national parliaments, policies should be considered that will facilitate women's use of formal financial services.

I. Appendix

A. *National Observations on Independent and Dependent Variables, sorted in descending order of Women's Proportion of Seats in National Parliaments*

Country	Prop. of Seats in Nat'l Parliaments	Account at a Formal Financial Institution	Loan from a Financial Institution in the past year	Saved at a Financial Institution in the past year	Quota Binary
Rwanda	56.3	28.24671	7.950524	12.63624	1
Andorra	50				0
Cuba	45.2				0
Sweden	44.7	99.01312	22.46914	64.02469	1
Seychelles	43.8				0
Finland	42.5	99.8177	19.48407	57.22858	0
South Africa	42.3	51.02337	6.470269	20.55223	1
Netherlands	40.7	98.39974	9.151627	54.47229	1
Nicaragua	40.2	12.81508	6.592514	6.859719	1
Iceland	39.7				1
Norway	39.6				1
Mozambique	39.2	35.47271	5.396072	14.83712	1
Denmark	39.1	99.4979	19.24979	54.84122	1
Costa Rica	38.6	40.66185	7.840293	13.4324	1
Angola	38.2	38.92834	7.339787	13.24354	1
Belgium	38	97.18457	12.71261	38.55079	1
Argentina	37.4	31.81856	7.8105	3.618399	1
Spain	36	91.66148	9.674451	32.15982	1
Tanzania	36	13.82398	6.865949	11.40124	1
Uganda	35	15.06352	8.612303	12.61037	1
Nepal	33.2	21.21961	9.649933	7.109428	1
Germany	32.9	98.70454	10.92474	54.84963	1
Ecuador	32.3	33.15992	9.932518	10.7578	1
Timor-Leste	32.3				1
New Zealand	32.2	99.4483	25.43897	58.13282	0
Slovenia	32.2	98.1096	12.08908	29.18134	1
Belarus	31.8	58.07224	15.67754	6.770185	0
Guyana	31.3				1
Macedonia, FYR	30.9	71.54489	10.08486	7.517654	1
Burundi	30.5	5.928003	0.5300382	2.921388	1
Portugal	28.7	77.80403	6.455556	19.45911	1

Trinidad and Tobago	28.6	69.85585	7.087932	41.27208	1
Switzerland	28.5				1
Austria	27.9	96.56331	7.823859	50.48574	1
Ethiopia	27.8				0
Afghanistan	27.7	2.61623	4.925391	0.8737874	1
Tunisia	26.7	25.22964	2.780615	3.850408	1
South Sudan	26.5				1
Mexico	26.2	21.96588	6.688293	6.403767	1
Bolivia	25.4	25.10577	17.58055	16.42994	1
Iraq	25.2	7.547668	4.64817	2.656306	1
Lao PDR	25	26.15621	17.22371	18.98046	0
Luxembourg	25	95.32555	16.01912	48.51065	1
Canada	24.8	97.23316	17.82475	52.94839	1
Australia	24.7	98.59229	15.26236	58.96765	1
Sudan	24.6	4.354855	1.819269	2.416649	1
Namibia	24.4				1
Vietnam	24.4	18.90926	15.23619	6.677731	0
Lesotho	24.2	16.86643	2.680136	7.155986	1
Liechtenstein	24				0
Croatia	23.8	87.18468	14.92715	13.71214	1
Poland	23.7	68.2872	7.737828	16.20692	1
Kyrgyz Republic	23.3	3.944267	11.30374	0.9783548	1
Latvia	23	92.04856	8.193994	12.43838	0
Philippines	22.9	33.71373	12.8403	18.031	1
Senegal	22.7	5.450442	2.472498	3.021333	1
Pakistan	22.5	2.953578	1.935123	0.6671928	1
Malawi	22.3	16.88244	11.68936	8.891019	1
United Kingdom	22.3	97.65199	11.24206	41.45037	1
Singapore	22.2	98.21179	6.27649	58.71869	0
Mauritania	22.1	12.08743	7.257361	5.116176	1
Czech Republic	22	80.51359	8.772821	33.37513	1
Eritrea	22				1
Serbia	22	62.31583	14.40484	3.39322	1
Uzbekistan	22	21.29315	1.236033	0.5424895	1
Italy	21.6	64.34535	3.196751	12.42344	1
Peru	21.5	17.56129	12.35431	7.814788	1
Bosnia and Herzegovina	21.4	47.72136	12.65102	5.192334	1
China	21.3	60.00867	6.133404	32.09019	1
Bulgaria	20.8	55.45132	7.376585	4.73976	0
Cape Verde	20.8				1
Dominican Republic	20.8	37.37682	12.0522	15.3768	1

Cambodia	20.3	3.712341	20.08803	0.246133	0
Israel	20	92.43819	15.16874	24.14126	1
Estonia	19.8	97.26136	7.299046	28.37461	0
Moldova	19.8	17.17139	6.556089	3.49937	1
Bangladesh	19.7	34.89121	22.32131	15.133	1
Honduras	19.5	14.92036	6.452175	6.193172	1
Lithuania	19.1	76.06694	5.574603	21.54978	1
El Salvador	19	10.13223	2.815245	8.738501	1
Monaco	19				0
Tajikistan	19	2.135162	3.218527	0.0761863	0
France	18.9	96.57256	17.35121	45.69997	1
Mauritius	18.8	74.73274	9.002164	27.06183	0
Greece	18.7	75.70966	5.066993	21.73693	1
San Marino	18.3				0
Indonesia	18.2	19.20753	8.151073	15.86503	1
Sao Tome and Principe	18.2				0
Kazakhstan	17.8	43.73284	14.39212	6.331445	1
United Arab Emirates	17.5	47.20844	7.923073	15.1256	0
St. Vincent and the Grenadines	17.4				0
Morocco	17	26.68675	3.622184	5.586821	1
Venezuela, RB	17	36.15054	1.49087	9.658226	1
Turkmenistan	16.8	0.7939227	1.066074	0.2299886	0
United States	16.8	84.06905	18.27112	47.63561	0
St. Lucia	16.7				0
Azerbaijan	16	14.25925	15.32948	1.326089	0
Slovak Republic	16	78.91837	10.3377	35.43148	1
Thailand	15.8	72.63754	17.93429	42.82499	1
Albania	15.7	22.67261	5.994867	6.786743	1
Korea, Dem. Rep.	15.6				0
Burkina Faso	15.3	10.81371	2.873962	6.022847	1
Ireland	15.1	92.20029	14.38807	52.63711	1
Zimbabwe	15	37.12441	4.247175	16.97056	1
Korea, Rep.	14.7	93.10782	12.87975	47.71442	1
Chile	14.2	40.97443	5.874371	10.42378	1
Gabon	14.2	17.17236	1.323205	5.166698	0
Turkey	14.2	32.67998	2.412485	2.001607	1
Cameroon	13.9	10.88144	3.412774	7.189256	1
Djibouti	13.8	8.762782	3.818295	2.725754	1
Russian Federation	13.6	47.70323	7.429877	11.55273	0
Swaziland	13.6	27.41395	10.00523	15.34778	0

Grenada	13.3				0
Guatemala	13.3	15.58662	11.18453	6.160515	1
Niger	13.3	1.451922	1.555224	0.9899623	1
Sierra Leone	12.9	12.80254	6.477045	10.60969	1
Chad	12.8	6.769446	6.048054	5.044189	0
Jamaica	12.7	67.12254	7.636121	26.46701	0
Central African Republic	12.5	3.411752	0.9483109	2.712689	0
Dominica	12.5				0
Madagascar	12.5	4.611975	1.616486	1.458682	0
Paraguay	12.5	22.71478	12.93029	9.280089	1
Syrian Arab Republic	12.4	19.588	11.49726	4.747674	0
Montenegro	12.3	48.92861	20.16367	3.038284	1
Bahamas, The	12.2				0
Colombia	12.1	25.35456	10.56265	8.328886	1
Uruguay	12.1	23.82965	13.68546	5.955068	1
Suriname	11.8				0
Zambia	11.5	23.33739	7.849719	13.06459	0
Romania	11.2	41.06061	6.722723	8.59155	1
Togo	11.1	9.217669	4.29252	2.629911	1
Cote d'Ivoire	11				1
India	11	26.4905	6.742837	7.095501	1
Japan	10.8	96.8449	3.509211	53.72907	0
Jordan	10.8	17.3577	3.566669	6.595288	1
Cyprus	10.7	83.07365	24.69956	25.6635	1
Antigua and Barbuda	10.5				0
Malaysia	10.4	63.09647	10.27674	30.18593	0
Mali	10.2	6.909979	1.858731	3.325105	1
Bahrain	10	48.77767	6.202654	11.25193	0
Barbados	10				0
Equatorial Guinea	10				0
Guinea-Bissau	10				0
Kenya	9.8	39.17881	6.788294	19.20147	1
Liberia	9.6	14.68394	5.711397	11.09582	1
Hungary	8.8	73.0622	10.22446	16.50885	1
Kiribati	8.7				0
Malta	8.7	94.07024	7.4375	39.27093	1
Brazil	8.6	51.01785	6.126243	7.802369	1
Bhutan	8.5				0
Panama	8.5	23.3099	8.301247	11.53034	1
Armenia	8.4	18.14856	19.4945	1.096303	1
Benin	8.4	9.807354	5.171425	6.258737	0

Ghana	8.3	27.0883	5.842479	14.48267	1
Algeria	8	20.4073	0.4886589	2.955965	1
Ukraine	8	39.20775	8.042524	5.14596	0
Botswana	7.9	28.36033	4.938264	15.61857	1
Kuwait	7.7	79.60854	17.06288	38.04803	0
Gambia, The	7.5				0
Congo, Rep.	7.3	6.784462	1.518981	3.696842	0
Nigeria	6.8	25.9904	1.951395	20.90756	0
Somalia	6.8	27.29579	0.7867508	9.697814	1
St. Kitts and Nevis	6.7				0
Tuvalu	6.7				0
Georgia	6.6	34.92281	12.21247	1.481105	1
Maldives	6.5				0
Sri Lanka	5.8	67.23842	19.39564	26.223	1
Haiti	4.2	21.07225	10.01751	16.28275	1
Samoa	4.1				1
Mongolia	3.9	82.365	24.37819	25.42971	1
Tonga	3.6				0
Myanmar	3.5				0
Lebanon	3.1	25.89981	8.484057	10.20525	1
Comoros	3	17.89296	5.845753	10.95054	0
Marshall Islands	3				0
Iran, Islamic Rep.	2.8	61.87651	30.27675	17.11458	0
Egypt, Arab Rep.	2	6.517278	2.748747	0.6768445	1
Vanuatu	1.9				0
Oman	1.2	63.52985	6.172167	17.86066	0
Papua New Guinea	0.9				0
Yemen, Rep.	0.3	1.089594	0.7406023	0.1050647	0
Belize	0				0
Micronesia, Fed. Sts.	0				0
Palau	0				0
Qatar	0	61.56953	9.846316	21.15514	0
Saudi Arabia	0	15.23301	1.395731	6.144174	0
Solomon Islands	0				0
Congo, Dem. Rep.		2.751882	1.544402	0.7088403	0
Fiji					0
Guinea		2.934914	1.480353	2.080213	1
Kosovo		31.45454	5.552346	3.910238	0
Libya					1
Brunei Darussalam					0

B. Regional and Income Comparison of Political Participation by Nation

Region	Percentage of Women in Parliament
Arab World	11.34%
Caribbean (developing only)	**32.31% (highest)**
Caribbean Small States	15.85%
Central Africa (developing only)	N/A
Central America (developing only)	22.99%
Central Asia (developing only)	20.00%
East and Southern Africa (developing only)	24.77%
East Asia & Pacific (all income levels)	17.73%
East Asia & Pacific (developing only)	17.87%
Eastern Asia (developing only)	19.90%
Eastern Europe (developing only)	13.10%
Euro Area	26.37%
Europe & Central Asia (all income levels)	22.71%
Europe & Central Asia (developing only)	15.34%
European Union	24.86%
Heavily Indebted Poor Countries	20.36%
High Income	23.27%
High Income: non-OECD	14.15%
High Income: OECD	25.42%
Latin America & Caribbean (all income levels)	23.04%
Latin America & Caribbean (developing only)	23.88%
Least Developed Countries: UN Classification	20.60%
Low & Middle Income	18.59%
Low Income	20.46%
Lower Middle Income	14.36%
Middle East (developing only)	10.00%
Middle East & North Africa (all income levels)	10.06%
Middle East & North Africa (developing only)	10.52%
Middle Income	17.90%
North Africa	11.03%
North America	20.11%
OECD Members	24.16%
Other Small States	15.81%
Pacific (developing only)	**2.67% (lowest)**
Pacific Island Small States	N/A
Small States	13.97%
South America (developing only)	19.40%
South Asia	20.34%
South Asia, excluding India	23.04%
South-Eastern Asia (developing only)	17.40%
Southern Europe (developing only)	15.96%
Sub-Saharan Africa (all income levels)	20.55%
Sub-Saharan Africa (developing only)	20.68%
Upper Middle Income	20.44%
West Africa (developing only)	11.82%

C. Regression Results for Dependent Variable Regressed on Each Independent Variable with Contextual Control Variables

Regression Analysis Results for Accounts in a Formal Financial Institution Proxy

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
N	142	139	142	140	139	137	140	137	77
Adj. R Squared	0.12	0.11	0.11	0.20	0.11	0.19	0.20	0.19	0.21
Accounts in Formal Financial Institutions	0.08 (0.00)***	0.07 (0.09)*	0.09 (0.00)***	0.08 (0.00)***	0.08 (0.06)*	0.06 (0.09)*	0.06 (0.11)	0.05 (0.25)	0.06 (0.31)
Quota	6.33 (0.00)***	6.58 (0.00)***	6.38 (0.00)***	6.52 (0.00)***	6.72 (0.00)***	6.94 (0.00)***	6.44 (0.00)***	6.83 (0.00)***	6.61 (0.01)**
GDP per Capita		0.00 (0.70)			0.00 (0.62)	0.00 (0.57)		0.00 (0.65)	0.00 (0.80)
Life Expectancy at Birth			-0.06 (0.59)		-0.09 (0.42)		0.11 (0.31)	0.08 (0.48)	0.15 (0.33)
Labor Force Participation Rate				0.19 (0.00)***		0.20 (0.00)***	0.21 (0.00)***	0.21 (0.00)***	0.26 (0.00)***
Primary School Enrollment									0.00 (0.99)

Regression Analysis Results for Loans at a Financial Institution Proxy

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
N	142	139	142	140	139	137	140	137	77
Adj. R Squared	0.08	0.09	0.08	0.15	0.11	0.18	0.18	0.18	0.20
Loans at a Financial Institutions	0.25 (0.08)*	0.13 (0.40)	0.19 (0.23)	0.21 (0.14)	0.14 (0.39)	0.06 (0.68)	0.02 (0.89)	-0.02 (0.93)	0.11 (0.63)
Quota	6.42 (0.00)***	6.80 (0.00)***	6.33 (0.00)***	6.60 (0.00)***	6.85 (0.00)***	7.15 (0.00)***	6.37 (0.00)***	6.89 (0.00)***	7.16 (0.00)***
GDP per Capita		0.00 (0.06)*			0.00 (0.08)*	0.00 (0.02)**		0.00 (0.18)	0.00 (0.74)
Life Expectancy at Birth			0.08 (0.39)		-0.03 (0.81)		0.23 (0.02)**	0.15 (0.18)	0.19 (0.21)

Labor Force Participation Rate				0.18 (0.00)***		0.20 (0.00)***	0.23 (0.00)***	0.23 (0.00)***	0.27 (0.00)***
Primary School Enrollment									-0.01 (0.94)

Regression Analysis Results for Loan Any Money in the Past Year Proxy

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
N	142	139	142	140	139	137	140	137	77
Adj. R Squared	0.06	0.09	0.07	0.15	0.11	0.18	0.18	0.18	0.20
Loan Any Money in the Past Year	-0.05 (0.49)	-0.01 (0.89)	-0.01 (0.94)	-0.08 (0.24)	-0.01 (0.89)	-0.05 (0.48)	0.00 (0.97)	-0.02 (0.83)	0.07 (0.54)
Quota	6.04 (0.00)***	6.77 (0.00)***	6.21 (0.00)***	5.97 (0.00)***	6.78 (0.00)***	6.84 (0.00)***	6.34 (0.00)***	6.81 (0.00)***	7.59 (0.00)***
GDP per Capita		0.00 (0.03)**			0.00 (0.06)*	0.00 (0.02)**		0.00 (0.18)	0.00 (0.74)
Life Expectancy at Birth			0.13 (0.18)		-0.01 (0.96)		0.24 (0.01)**	0.14 (0.22)	0.25 (0.09)*
Labor Force Participation Rate				0.20 (0.00)***		0.21 (0.00)***	0.24 (0.00)***	0.23 (0.00)***	0.28 (0.00)***
Primary School Enrollment									-0.01 (0.86)

Regression Analysis Results for Savings at a Financial Institution Proxy

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
N	142	139	142	140	139	137	140	137	77
Adj. R Squared	0.14	0.13	0.13	0.22	0.12	0.19	0.21	0.20	0.23
Savings at a Financial Institutions	0.18 (0.00)***	0.19 (0.02)**	0.18 (0.00)***	0.16 (0.00)***	0.19 (0.02)**	0.13 (0.10)	0.11 (0.06)*	0.11 (0.16)	0.22 (0.09)*
Quota	6.42 (0.00)***	6.55 (0.00)***	6.43 (0.00)***	6.53 (0.00)***	6.59 (0.00)***	6.92 (0.00)***	6.43 (0.00)***	6.73 (0.00)***	5.88 (0.03)**
GDP per Capita		0.00 (0.77)			0.00 (0.83)	0.00 (0.67)		0.00 (0.94)	0.00 (0.39)
Life Expectancy at Birth			-0.01 (0.94)		-0.02 (0.85)		0.14 (0.16)	0.12 (0.26)	0.18 (0.19)
Labor Force Participation				0.17		0.18	0.20	0.20	0.24

Rate				(0.00)***		(0.00)***	(0.00)***	(0.00)***	(0.00)***
Primary School Enrollment									0.00 (0.99)

Regression Results for Saved Any Money in the Last Year Proxy

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
N	142	139	142	140	139	137	140	137	77
Adj. R Squared	0.14	0.14	0.14	0.20	0.13	0.19	0.21	0.20	0.21
Saved Any Money in the Last Year	0.18 (0.00)***	0.17 (0.01)***	0.17 (0.00)***	0.15 (0.00)***	0.18 (0.01)***	0.10 (0.14)	0.11 (.036)**	0.10 (0.14)	0.13 (0.23)
Quota	7.15 (0.00)***	7.17 (0.00)***	7.08 (0.00)***	7.10 (0.00)***	7.10 (0.00)***	7.29 (0.00)***	6.83 (0.00)***	7.02 (0.00)***	6.50 (0.01)**
GDP per Capita		0.00 (0.96)			0.00 (0.89)	0.00 (0.37)		0.00 (0.88)	0.00 (0.63)
Life Expectancy at Birth			0.04 (0.63)		0.04 (0.72)		0.16 (0.07)*	0.15 (0.16)	0.27 (0.12)
Labor Force Participation Rate				0.16 (0.00)***		0.17 (0.00)***	0.20 (0.00)***	0.20 (0.00)***	0.24 (0.00)***
Primary School Enrollment									0.00 (0.99)

Regression Analysis Results for Credit Card Proxy

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
N	142	139	142	140	139	137	140	137	77
Adj. R Squared	0.10	0.12	0.11	0.19	0.09	0.18	0.19	0.18	0.29
Credit Cards	0.12 (0.01)***	0.08 (0.33)	0.12 (0.04)**	0.12 (0.01)***	0.09 (0.31)	0.06 (0.43)	0.07 (0.23)	0.03 (0.68)	0.47 (0.00)***
Quota	6.38 (0.00)***	6.55 (0.00)***	6.38 (0.00)***	6.55 (0.00)***	6.70 (0.00)***	7.03 (0.00)***	6.43 (0.00)***	6.85 (0.00)***	6.67 (0.01)***
GDP per Capita		0.00 (0.62)			0.00 (0.60)	0.00 (0.42)		0.00 (0.55)	0.00 (.049)**
Life Expectancy at Birth			0.00 (0.99)		-0.03 (0.80)		0.16 (0.13)	0.13 (0.22)	0.09 (0.51)
Labor Force Participation Rate				0.19 (0.00)***		0.20 (0.00)***	0.22 (0.00)***	0.22 (0.00)***	0.23 (0.01)***

Primary School Enrollment									0.03 (0.70)

D. Regression Results for Disaggregation by Quota

Loans at a Financial Institution Proxy

	Model 6	**No Quota (quota=0)**	**Quota (quota=1)**
N	137	38	99
Adj-R Squared	0.18	0.32	0.12
Saved at a Financial Institutions	0.06 (0.68)	0.53 (0.01)***	-0.29 (0.16)
Quota	7.15 (0.00)***	N/A	N/A
GDP per Capita	0.00 (0.02)**	0.00 (0.79)	0.00 (0.00)***
Labor Force Participation Rate	0.20 (0.00)***	0.27 (0.00)***	0.18 (0.01)***

Loans in the Past Year Proxy

	Model 6	**No Quota (quota=0)**	**Quota (quota=1)**
N	137	38	99
Adj-R Squared	0.18	0.16	0.11
Loan in the Past Year	-0.05 (0.48)	0.02 (0.84)	-0.06 (0.50)
Quota	6.84 (0.00)***	N/A	N/A
GDP per Capita	0.00 (0.00)***	0.00 (0.39)	0.00 (0.02)***
Labor Force Participation Rate	0.21 (0.00)***	0.29 (0.00)***	0.18 (0.01)***

Saved at a Formal Financial Institution Proxy

	Model 6	**No Quota (quota=0)**	**Quota (quota=1)**
N	137	38	99
Adj-R Squared	0.19	0.32	0.10
Saved at a Financial Institutions	0.13 (0.10)	0.28 (0.01)***	0.02 (0.87)
Quota	6.92 (0.00)***	N/A	N/A
GDP per Capita	0.00	0.00	0.00

	(0.67)	(0.23)	(0.16)
Labor Force Participation Rate	0.18 (0.00)***	0.27 (0.00)***	0.16 (0.01)***

Saved Any Money in the Past Year Proxy

	Model 6	**No Quota (quota=0)**	**Quota (quota=1)**
N	137	38	99
Adj-R Squared	0.19	0.19	0.11
Saved Any Money in the Past Year	0.10 (0.14)	0.12 (0.22)	0.09 (0.34)
Quota	7.29 (0.00)***	N/A	N/A
GDP per Capita	0.00 (0.37)	0.00 (.97)	0.00 (0.29)
Labor Force Participation Rate	0.17 (0.00)***	0.27 (0.01)***	0.14 (0.05)**

Credit Card Proxy

	Model 6	**No Quota (quota=0)**	**Quota (quota=1)**
N	137	38	99
Adj-R Squared	0.18	0.34	0.11
Saved at a Financial Institutions	0.06 (0.43)	0.31 (0.01)***	-0.10 (0.36)
Quota	7.03 (0.00)***	N/A	N/A
GDP per Capita	0.00 (0.42)	0.00 (0.09)*	0.00 (0.03)**
Labor Force Participation Rate	0.20 (0.00)***	0.27 (0.00)***	0.17 (0.00)***

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